

REMARKS

This Response is submitted in reply to the Office Action dated July 10, 2008, and in conjunction with the enclosed Request for Continued Examination. In the Office Action of July 10, 2008, claims 9-13, 18, and 19 are rejected under 35 U.S.C. 102 and 103 and claims 14-17 and 20-22 have been indicated to include allowable subject matter. Claims 9, 14, and 18-20 have been amended and claims 23-29 have been added. Claims 9, 18, and 26 are in independent form. In the specification, paragraphs 4, 8, 11, 26, 30, 36, 37, and 48-50 have been amended. No new matter has been introduced as a result of these amendments.

In particular, independent claim 9 is hereby amended to include the following limitations: “a first antenna branch, having a first section, a second section, a foot portion, and a first turning point,” “a second antenna branch, being alongside the first antenna branch and having a third section, a fourth section, and a second turning point” and “the first section is parallel to the third section, the second section is parallel to the fourth section, a first gap is formed between the first and third sections, a second gap is formed between the second and fourth sections, and the first gap equals to the second gap.” Support for this amendment may be found, for example, in Fig. 1 and paragraph [0027] of the originally-filed specification. Independent claim 18 is hereby amended to include the limitation: “the first gap is in an L-shape.” Support for this amendment may be found, for example, in Fig. 1 of the originally-filed specification. Similarly, new claims 23-29 find support, for example, in Fig. 1 of the originally-filed specification. Also, for additional clarification, the term “foot point” has been amended to “foot portion” throughout the specification. Accordingly, all claim amendments are supported by the original specification, contribute no new matter to this application, and should be allowed to enter.

The Office Action rejected claims 9, 12, 13, 18 and 19 under 35 U.S.C. §102 as being anticipated by Kadambi et al. (US 2004/0056804). Applicant respectfully traverses this rejection on the ground that the teachings of the prior art reference do not disclose each and every element of the presently claimed invention.

A proper rejection of a claim under 35 U.S.C. §102 requires that a single prior art reference disclose each element of the claim. See, e.g., *W.L. Gore & Assoc., Inc. v. Garlock inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983).

Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. See e.g., *In re Paulsen*, 30 F.3d 1475, 31 USPQ 2d 1671 (Fed. Cir. 1994); *In re Spada*, 911 F.2d 705, 15 USPQ 2d 1655 (Fed. Cir. 1990).

Independent claim 9, as currently amended, recites:

9. (Currently Amended) A PIFA antenna arrangement for at least two mobile radio frequency bands having a desired separation from one another comprising:

a first antenna branch having a first section, a second section, a foot portion, and a first turning point, wherein the second section is connected to the first section and the foot portion, and the first turning point is located between the first and second sections;

a second antenna branch being alongside the first antenna branch and having a third section, a fourth section, and a second turning point, wherein the first antenna branch and the second antenna branch are in the form of strips and connected at the foot portion of the first antenna branch to form a series connection, the first section is parallel to the third section, the second section is parallel to the fourth section, a first gap is formed between the first and third sections, a second gap is formed between the second and fourth sections, and the first gap equals the second gap;

a ground connection, arranged at an outer edge of the first antenna branch facing away from the first gap; and

an RF supply connection is arranged at the outer edge of the second end of the first antenna branch where the ground connection is provided;

wherein the widths of the first antenna branch and the second antenna branch, the lengths of the first antenna branch and the second antenna branch, and the gaps between the first antenna branch and the second antenna branch are of such a size that the PIFA antenna structure has two resonant frequency bands that conform to the desired separation.

(Emphasis added)

Independent claim 9 is allowable for at least the reason that Kadambi does not disclose, teach, or suggest the features that are highlighted in claim 9 above. More specifically, kadambi does not disclose, teach, or suggest the first gap equaling the second gap. In Kadambi, sections 14, 15, and 16 (the first antenna branch as defined by the Examiner) and sections 12 and 13 (the second antenna branch as defined by the Examiner), provide unequal gaps between the opposing sections. For example, the gap between parallel sections 13 and 15 (of the first and second branches defined by the Examiner) is wide, and therefore not equal to the gap between parallel sections 12 and 14 (of the first and second branches defined by the Examiner), which is narrow. Therefore, according to the current patent law, since the teaching of Kadambi does not disclose,

teach, or suggest all the features in the claimed invention, the §102 rejection is properly overcome. Applicant respectfully submits that independent claim 9 is in condition for allowance and requests prompt allowance of independent claim 9.

Dependent claims 12 and 13 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 9. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Independent claim 18, as currently amended, recites:

18. (Currently Amended) A PIFA antenna comprising:
a first antenna branch having an L-shape;
a second antenna branch having an L-shape, the second antenna branch being alongside the first antenna branch, and the second antenna branch having a first gap with the first antenna branch, wherein the second antenna branch is connected to a first end of the first antenna branch to form a series connection and the first gap is in an L-shape;
a ground connection set near a second end of the first antenna branch;
and
an RF supply connection, wherein the ground connection and the RF supply connection are arranged at an outer edge of the first antenna branch facing away from the first gap.
(Emphasis added)

Independent claim 18 is allowable for at least the reason that Kadambi does not disclose, teach, or suggest the features that are highlighted in claim 18 above. More specifically, in Kadambi, as shown in Fig. 4B and cited by the Examiner, the antenna 70 comprises a radiating element 52 (the first antenna as defined by the Examiner) having a generally U-shaped slot 53 (the gap as defined by Examiner). The U-shaped slot 53 is not a gap in an L-shape. In addition, the short-circuit stub 71 shown in Fig. 4B (the ground connection as defined by Examiner) is not near the second end of the first antenna branch (as defined by the Examiner). Therefore, according to the current patent law, since the teaching of Kadambi does not disclose, teach, or suggest all the features in the claimed invention, the §102 rejection is properly overcome. Applicant respectfully submits that independent claim 18 is in condition for allowance and requests prompt allowance of independent claim 18.

Dependent claim 19 is believed to be allowable for at least the reason that this claim depends from allowable independent claim 18. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Further, claim 19 recites that “a length of the foot portion, is substantially equal to the gap” which is not disclosed, taught, or suggested by Kadambi. Since Kadambi does not disclose, teach, or suggest all the features in the claimed invention, the §102 rejection is properly overcome.

Moreover, claim 23 recites that “a free end of the second antenna branch and the second end of the first antenna branch forms an opening of the first gap.” Claim 24 further limits the disposition of the RF supply connection stating that “the RF supply connection is set between the ground connection and the first end of the first antenna branch.” Claim 25 recites that “a first distance between a second end of the second section and the ground connection is substantially equal to the gap.” Claim 26 recites that “wherein a second end of the second antenna branch and the second end of the first antenna branch form an opening of the gap.” Claim 27 recites that “a length of the foot section is substantially equal to the gap.” Claim 28 recites that “a first distance between the third section and the second section is substantially equal to a width of the gap.” Claim 29 recites that “a second distance between the fourth section and the first section is substantially equal to the width of the gap.” It is believed that the above-identified limitations are not disclosed, taught, or suggested by Kadambi. Since Kadambi does not disclose, teach, or suggest all the features in the claimed invention, applicants submit that each of claims 23-29 define over the cited art and are in condition for allowance. Applicant respectfully requests prompt allowance of claims 23-29.

The Office Action rejected claims 10-11 under 35 U.S.C. §103 as being unpatentable over Kadambi et al. (US 2004/0056804). Applicant respectfully traverses this rejection on the ground that the teachings of the prior art reference do not suggest all features of the claimed invention to one of ordinary skill in the art.

In order for a claim to be properly rejected under 35 U.S.C. §103, the teachings of the prior art reference must suggest all features of the claimed invention to one of ordinary skill in the art. *See, e.g., In re Dow Chemical*, 837 F.2d 469, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988); *In re Keller*, 642 F.2d 413, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

Dependent claims 10-11 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 9. Therefore, according to the current patent law, since the teachings of Kadambi does not disclose, teach, or suggest all the features in the claimed invention, the §103 rejection is properly overcome. Applicant respectfully submits that independent


claim 10-11 are in condition for allowance and requests prompt allowance of dependent claims 10-11.

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all rejections have been traversed, rendered moot, and/or accommodated, and that the currently pending claims 9-29 are presently in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If the Examiner has any questions regarding this Response, the Applicant respectfully requests that the Examiner contact the undersigned.

The Commissioner is hereby authorized to charge deposit account 02-1818 for any fees which are due and owing.

Respectfully submitted,

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